

## Measuring well-being: W3 indicators to complement GDP

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## Measuring Well-Being: W3 Indicators to Complement GDP

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Richard Hilmer  
Nico A. Siegel  
Gert G. Wagner

May 2013

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# Measuring Well-Being: W3 Indicators to Complement GDP

Marco Giesselmann<sup>1</sup>, Richard Hilmer<sup>2</sup>, Nico A. Siegel<sup>3</sup>,  
and Gert G. Wagner<sup>1,4</sup>

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## *Summary:*

Numerous people in Germany, including politicians and researchers, believe that the gross domestic product (GDP) is an outdated indicator of a society's prosperity. Therefore, at the end of 2010, the German Bundestag, the federal parliament, established a study commission (*Enquete-Kommission*) tasked with developing an alternative to the GDP for measuring growth, prosperity, and quality of life. This commission has now submitted a proposal: to supplement the GDP with nine additional indicators, including a wide range of factors such as the distribution of income, biodiversity, and life expectancy. The ten indicators cover three dimensions of well-being—economy, ecology, and social wealth—and hence are called W3 Indicators.

Replacing the gross domestic product by a single alternative index was rejected by the commission, however, since it is not possible to reduce citizens' very different wishes and expectations to “a common denominator.” A representative survey of registered voters conducted by DIW Berlin and TNS Infratest shows that citizens consider the indicators proposed by the commission to be important. Respondents ranked preserving “democracy and freedom” as the most relevant indicator and “further increasing life expectancy” as the least relevant. The average per capita income – as an indicator of the gross domestic product – is the second least relevant factor as far as registered voters in Germany are concerned. However, the study also shows that opinions on the importance of different indicators vary widely. Moreover, there are systematic differences in the relevance of various policy areas for different social groups.

*Keywords: GDP, GDP and beyond, quality of life, Germany, TNS Infratest, SOEP, W3 Indicators*

*JEL-Klassifikation: B59, D63, H11, I32, Z18*

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Plenty of people in Germany, including politicians and researchers, believe that gross domestic product (GDP) is an outdated indicator of a society's prosperity. Therefore, at the end of 2010, the German Bundestag, the federal parliament, established a study commission (Enquete Kommission) tasked with developing an alternative to GDP for measuring growth, wealth, and quality of life. This commission has now submitted a proposal: to complement GDP with nine additional indicators, covering a wide range of areas such as the distribution of income, biodiversity, and life expectancy.<sup>1</sup>

Replacing gross domestic product with a single alternative index was rejected by the commission, however, since it is not possible to reduce citizens' very different wishes and expectations to "a common denominator."

The ten indicators cover three dimensions of well-being—economy, ecology, and social wealth—and hence are called W3 Indicators.<sup>2</sup> This name, which emphasizes the equal importance of the three dimensions, is concise and memorable enough to position itself alongside GDP.

A representative survey of registered voters conducted by DIW Berlin and TNS Infratest shows that citizens generally consider all the new indicators proposed by the commission to be important. Respondents ranked preserving "democracy and freedom" as the most relevant indicator and "further increasing life expectancy" as the least relevant. Average per capita income—as an indicator of gross domestic product—is rated as the second least relevant factor. Moreover, the study also shows that opinions on the importance of different indicators vary considerably across socio-economic groups.

## Background

The key aim of the Study Commission (Enquete Kommission) "Growth, Prosperity, and Quality of Life" established by the German Bundestag was to look for an alternative to gross domestic product (GDP) as an indicator of prosperity.<sup>3</sup> The catalog of indicators<sup>4</sup> now proposed for measuring wealth and life quality may well have disappointed all those who not only called for the abolition of GDP, but a fundamental re-evaluation of growth policy at the same

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<sup>1</sup> See (in German only)

[http://www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/123\\_EKWW\\_L\\_Gesamtbericht\\_Teil1.pdf](http://www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/123_EKWW_L_Gesamtbericht_Teil1.pdf) and

[http://www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/123\\_EKWW\\_L\\_Gesamtbericht\\_Teil2.pdf](http://www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/123_EKWW_L_Gesamtbericht_Teil2.pdf).

<sup>2</sup> See (in German only)

[http://www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/140\\_Kapitel\\_A\\_2\\_1\\_W3\\_Indikatoren\\_V4.pdf](http://www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/140_Kapitel_A_2_1_W3_Indikatoren_V4.pdf).

<sup>3</sup> One of the authors of the present study, Gert G. Wagner, is an expert member of the Study Commission (Enquete Kommission).

<sup>4</sup> See the final report of the Project Group 2, Entwicklung eines ganzheitlichen Wohlstands- bzw. Fortschrittsindikators, the commission's printed paper 17(26)87

([www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/87\\_Abschlussbericht\\_PG\\_2.pdf](http://www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/87_Abschlussbericht_PG_2.pdf)), 11 and 14.

time.<sup>5</sup> No single alternative to GDP has been proposed but, instead, GDP would be complemented by nine further leading indicators, also taking into account the areas “social inclusion” and “ecology” in addition to “material wealth.”

There was a consensus in the study commission that one single alternative indicator, in other words, any type of “anti-GDP”, is inappropriate for methodological reasons and not consistent with democratic ideals (see Appendix 1)<sup>6</sup>: if various aspects of growth, wealth, and quality of life were “condensed” into a single number, the individual values would have to be weighted. But how important is environmental protection, for instance, compared to material wealth? There is no consensus about this either among the general population or the research community, which comes as no surprise since people pursue different objectives (and the research community should not make any value judgments here). Different assessments lead to political controversies which are addressed on a daily basis and are ultimately decided at elections for a certain legislative period. In a democratic society, this is not the end of political debate, however; moreover, the minority will not necessarily accept the weighting and prioritizations of the majority.

Specifically, the study commission’s catalog of indicators for measuring growth, wealth, and life quality comprises ten leading indicators (GDP, income distribution, public debt ratio, employment, education, life expectancy, freedom, greenhouse gas emissions, nitrogen surplus,<sup>7</sup> and biodiversity), which are classified according to three dimensions (material wealth, social inclusion, and ecology), as well as nine “warning lights” (see Figure 1).<sup>8</sup> In addition, there is an “indicator light” which will in, say, five-year periods shed light on the areas of “non-marketable production” and “household production”. The “indicator light” is proposed, because no regular statistical surveys on non-marketable production are conducted in Germany yet.

Critics of measuring prosperity with ten leading indicators and nine “warning lights” argue that it would not be feasible to convey this high number of

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<sup>5</sup> See (in German only) a proposed amendment by Alliance 90/the Green Party, commission's printed paper 17(26)89

([www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/89\\_Abschlussbericht\\_PG\\_2\\_B90DieGrünen\\_ÄnderungsAntrag.pdf](http://www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/89_Abschlussbericht_PG_2_B90DieGrünen_ÄnderungsAntrag.pdf)) and a proposed amendment by the Left Party, the commission's printed paper 17(26)88

([www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/88\\_Abschlussbericht\\_PG\\_2\\_DIE\\_LINKE\\_Sondervotum.pdf](http://www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/88_Abschlussbericht_PG_2_DIE_LINKE_Sondervotum.pdf)).

<sup>6</sup> The frequently cited French “Fitoussi et al. Commission”, including, among other members, Nobel Prize winners in economics Sen and Stiglitz, also does not propose an “anti-GDP” but a differentiated statistical description of prosperity and quality of life.

<sup>7</sup> Nitrogen surpluses arise as a result of agricultural production, during which nitrogen is used as a plant nutrient. According to information provided by the German Federal Environment Agency, nitrogen surpluses cause “extensive environmental problems” such as pollution of the ground water, the production of greenhouse gases, and the reduction of biodiversity. The annual nitrogen surplus has decreased by 27 percent since 1991, but is still much higher than the envisaged target. See [www.umweltbundesamt-daten-zur-umwelt.de/umweltdaten/public/theme.do?nodeId=2879](http://www.umweltbundesamt-daten-zur-umwelt.de/umweltdaten/public/theme.do?nodeId=2879).

<sup>8</sup> Warning lights show if there are changes in indicators that go beyond certain limits: net rate of investment, wealth distribution, financial sustainability of the private sector, underemployment rate, further training rate, healthy life years, global values of greenhouse gas emissions, nitrogen surplus, and biodiversity.

indicators in the media. In light of this, only three leading indicators have been proposed as alternatives by the parliamentary group *Die Linke* (the Left Party), four indicators by the parliamentary group Bündnis 90/Die Grünen (Alliance 90/the Green Party), and five indicators by expert Meinhard Miegel.<sup>9</sup> Here, it is striking that, similar to the concept of warning lights favored by the majority of the Enquete Commission, the Left Party has proposed another 28 “additional aspects”<sup>10</sup> to complement their three leading indicators.

The present article does not intend to discuss the meaningfulness of the selected W3 indicators compared to alternative concepts. Instead, the aim is to empirically study whether a) the ten indicators selected by the commission are considered important by citizens, b) how broadly the citizens’ ratings on the importance are spread and c) to what extent individual differences in ratings are linked to socio-economic characteristics and political preferences. For this purpose, together with the fieldwork organization TNS Infratest, DIW Berlin conducted a representative telephone survey amongst Germany’s registered voters in January 2013 (see Appendix 2) immediately after the W3 concept was approved by the relevant working group of the Study Commission.

## **Maintaining Democracy and Freedom of Greatest Importance**

The most important result of the representative survey is that the statement that democracy and freedom should be maintained was seen as being of greatest relevance, with an average value of 9.4 on a scale from zero (= not at all relevant) to 10 (of highest relevance) (see Figure 2).<sup>11</sup> This is a statistically significantly higher average value than seen for any other indicator, observed across all age groups and party political leanings. Only the importance of the statement that as many people as possible should have work achieves a similarly high average value of 9.2. In the eyes of the German population, these two aspects of prosperity being are therefore the most important ones by far.

Generally, ratings of the degree of importance of the ten indicators (i.e., survey responses) differ considerably across the population. Although in all dimensions only a few people rate the lowest values between zero and five (see Figure 3), the responses mainly show a broad range between six and ten. Surprisingly, with an average of 6.6, a further increase in the life expectancy is considered to be by far the least important area (the median<sup>12</sup> value is seven).

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<sup>9</sup> See [www.denkwerkzukunft.de/index.php/aktivitaeten/index/Wohlstandsquintett](http://www.denkwerkzukunft.de/index.php/aktivitaeten/index/Wohlstandsquintett). Professor Miegel was appointed by the Christian Democratic Union (CDU) and Christian Social Union (CSU) German political parties.

<sup>10</sup> See the proposed amendment by the Left Party, 6.

<sup>11</sup> In order to even out imbalances between the sample and the population, a weighting scheme provided by TNS was used in all the analyses.

<sup>12</sup> The median divides the respondents into two equal groups: the proportions of evaluations above and below the median are both exactly identical.

This may indicate that nowadays people often associate additional years of life with illness and suffering.<sup>13</sup>

Average income—as an indicator of GDP—is almost at the end of the scale of importance with an average value of 7.4. The mean value for inequality of income distribution is an average eight, and public debt is close to the average for all indicators (8.2) at 8.3 points on the scale. The demand that more students obtain a further school or educational qualification (8.5) is only slightly above-average.

As in other studies on the political preferences of the population, not much importance is attached to the ecological indicators which have average of about eight. Although the human race cannot survive if emissions of greenhouse gases and a serious nitrogen surplus are allowed to continue increasing, many people do not consider this to be an extremely pressing problem today. Indeed, we cannot feel the impact of the problem today because it will only become acute some time in the distant future. But it already exists.

## **East Germans Give Higher Weighting to GDP Than West Germans**

In addition to the differences in the average levels of ratings, systematic differences can also be identified across population groups. The descriptive distinction between East and West shows that respondents in eastern Germany attribute considerably higher significance to virtually all indicators (see Figure 4). This applies particularly to life expectancy (which was lower in the GDR than in West Germany before reunification), per capita income and inequality of income distribution.

Gender differences are minor; women prove to be more sensitive when it comes to the environment, however (see Figure 5). When age is taken into account, it can be observed that more importance is attached to almost all areas of life by older people (see Figure 6). However, the indicators per capita income and inequality of income distribution are less frequently considered to be particularly important by people of retirement age. This is probably because the relevant policies mainly affect the core group of the working population (30 to 59 years).

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<sup>13</sup> This result also shows that the wording of a question about a field of relevance is of utmost importance. When we compare the results of TNS Infratest's survey with the results of the online survey run by the OECD (<http://www.oecdbetterlifeindex.org/>), we see that respondents to the OECD's survey rate the dimension "health" high and the dimension "civic engagement" low. This is in stark contrast to the low ratings of "longer life" and high rating of "democracy" in the survey by TNS. However, the differences are easy to interpret: better health (= good health condition) is something very different from "just living longer" (maybe in poor health). And ranking democracy very high as a prerequisite for a good life (as a kind of "free lunch") is very different from active civic engagement.



The analysis by political affiliation shows distinct differences, the extent of which is, however, relatively small compared with socio-structural characteristics for some areas of relevance (see Figure 7).

## **Citizens' Concerns in Line with Their Assessment of Areas of Well-Being**

More information about assessments of the importance of various policy objectives is provided by data collected by TNS Infratest Sozialforschung on behalf of DIW Berlin for the German Socio-Economic Panel Study (SOEP).<sup>14</sup> Although respondents are not asked directly about the subjective relevance of various policy areas, concerns about the different aspects of economic, environmental and social affairs are measured. The SOEP measurements therefore not only incorporate an assessment of the significance of individual areas but also the subjectively perceived threat to the relevant objectives. The analyses of items measuring concerns in the SOEP (see Figure 8) nevertheless show strong analogies to prioritizations of indicators selected by the Enquete Commission.

Not only is the greatest relevance attached to maintaining democracy, but also large sections of the population are concerned about being able to safeguard the federal German model of society (measured by concerns about securing of peace). Also with regard to levels of concern, sustainability aspects only occupy a middle position, while economic aspects in both surveys are evaluated as low: just as a relatively low level of relevance is currently attributed to per capita income, few people expressed major concerns about the general economic situation.<sup>15</sup> One finding of the SOEP timeline with regard to concerns is, however, also—which is hardly surprising—that in times of falling unemployment and economic growth, there is a decrease in economic concerns: between 2008 and 2011, the SOEP recorded by far the highest proportion of people with major concerns about the economic situation, namely 44 percent, in 2009—as a consequence of the global financial crisis<sup>16</sup> which was characterized by a significant economic slump in Germany.

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<sup>14</sup> Wagner, Gert G., Joachim R. Frick and Juergen Schupp, The German Socio-Economic Panel Study (SOEP) – Scope, Evolution and Enhancements, in: Schmollers Jahrbuch, Vol. 127, No. 1, 2007, 139-169

<sup>15</sup> Further analyses of the indicators about concerns refer to other important areas of prosperity which were not taken into account in the commission's concept of indicators. For instance, in 2011, both the proportion of people who are very concerned about global terrorism (34 percent) or about crime in Germany (33 percent) are higher than the values shown (in Figure 8) for impacts of climate change and for general economic development (own calculations based on SOEP data for 2011).

<sup>16</sup> Own calculations based on SOEP data for 2008–2011.

## **Personal Characteristics and Attitudes Influence Survey Responses**

Using multiple regression analyses, it is possible to establish more accurately (than through simple comparisons of means) whether and to what extent the values the respondents attribute to the different W3 Indicators vary systematically according to various socio-economic characteristics (eastern/western Germany, gender, age, education, household income, employment status, and political affiliation). Again, the findings are based on the data collected by TNS Infratest on the importance of different prosperity indicators. For the respective dependent variables (attribution of relevance), the coefficients show the average deviation of certain groups compared with members of a reference group. For example, in the analysis of “per capita income,” the coefficient of 0.59 for the variable eastern Germany means that, on a scale of zero to ten, respondents in eastern Germany indicated an average value just under 0.6 points higher than respondents in western Germany (who form—within the methodology of linear regression—the “reference group”).

The regression method has two clear advantages over simply presenting the differences between group-specific mean values. First, the regression method tests group-specific differences directly for statistical significance. Moreover, the coefficients measure differences adjusted for structural characteristics and can therefore be interpreted as a “real” effect of the relevant characteristic. If, for instance, people with a low household income more frequently live in eastern Germany and household income has an effect on the attribution of relevance, the impact of the place of residence is overestimated on the basis of descriptive statistics, while the regression analysis shows adjusted net coefficients.

A regression model was calculated for each of the ten indicators (see table). The number of cases used in each analysis is slightly lower than the number of cases in the sample, since not all respondents provided assessments for every indicator. The findings show that people in eastern Germany evaluate all aspects of prosperity (except maintaining democracy) higher than West Germans. There are particularly strong (and statistically significant) region-specific mean differences in the assessment of the relevance of life expectancy (0.7 scale points), per capita income (0.6 scale points), and inequality of income distribution (0.5 scale points). Since the region-specific disparities in income were subtracted out, there is probably a context effect related to the aspect of income: the perception of a lack of economic prosperity in one’s environment may be accompanied by attaching more value to the relevant political objectives, even if one’s own income is relatively high. The fact that attributing more relevance to economic aspects in the east of Germany is directly associated with stronger concerns about the general economic situation is measured in the SOEP. The proportion of people in eastern Germany who

are extremely concerned is 20 percent higher on average across all income groups (and statistically significant) than in western Germany.<sup>17</sup>

Women tend to attribute above-average relevance, particularly with regard to environmental issues: compared to men, they rate a reduction of the nitrogen surplus and greenhouse gases as over half a scale point more important on average. Furthermore, the evaluations of the sustainability indicators are strongly correlated to age. The generation of today's over-60-year-olds see the reduction of environmentally harmful substances as more important by 0.7 scale points (greenhouse gases) or 0.8 scale points (nitrogen surplus) than 18 to 29-year-olds on average. It is surprising that environmental protection is only classified as a high-priority political objective by older people, since it is those who belong to the younger generations today who will be more directly affected by the impacts of climate change. Concerns about the environment are also influenced by age: the SOEP data show that the proportion of people who are extremely concerned about environmental protection is 13 percent higher in the over-40 age group than among 18 to 39-year-olds.<sup>18</sup>

If demographic and economic characteristics remain constant, people with an Abitur (school-leaving certificate that serves as a qualification for German university entrance) attribute below-average significance to all prosperity indicators. Those with an Abitur are therefore—if their above-average economic status is taken into account statistically—somewhat more relaxed than people without an Abitur.

It is striking that those with a mean household income evaluate general income and equality objectives statistically significantly higher than those in lower and high-income groups (by around half a scale point in both cases). On the other hand, demands for improvements in educational opportunities and life expectancy are particularly strong in lower income groups, while the evaluations of debt reduction and maintaining democracy as political objectives are clearly and statistically significantly below average for this group.

A person's labor market participation has only relatively little influence on how much relevance they ascribe to the various areas. Only the ratings of labor and health policy objectives can be clearly differentiated statistically by employment status. Here, it is not surprising that the unemployed generally see an increase in the employment rate as more important by about 0.4 scale points than those in gainful employment. However, what is surprising is that the positive effect of age on the desire to increase life expectancy is almost completely compensated by the negative effect of retirement status. Hence, an older person only gives an above-average assessment of the indicator for life expectancy if he or she is still in gainful employment. This seems to indicate an interest in working longer.

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<sup>17</sup> Own calculations on the basis of SOEP data for 2011.

<sup>18</sup> Own calculations on the basis of SOEP data for 2011.

Some differences, important in terms of content and statistical significance, are revealed by the analysis on voters of different parties. For instance, the relevance of per capita income is rated particularly high by Social Democratic Party (SPD) and Left Party voters. Even when place of residence and income are statistically controlled in the regression model, the latter evaluate this political objective as over one scale point more important than a CDU (Christian Democratic Union) voter on average.

The party-political coordinate system is most clearly reflected in the relevance attributed to the equality objective. Voters of SPD and the Green Party rate this almost one scale point higher than CDU voters on average. Supporters of the Left Party even rate this political objective 1.5 scale points more on average than CDU voters, while significantly below-average relevance is attached to it by liberal voters (FDP: Free Democratic Party).

It is surprising that despite the low number of cases of FDP voters in the sample ( $n = 27$ ), clearly negative and statistically significant coefficients are estimated for aspects of sustainability and education and health policy objectives: the ratings are, on average, one to two scale points lower for FDP voters than for CDU, SPD, and Green Party voters. This only applies to concerns about environmental protection measured in the SOEP to a limited extent: although—if income and age remain constant—voters of FDP have significantly less probability than SPD (or Green Party) voters of being very concerned about the environment; however, the difference between FDP and CDU supporters in the SOEP data is negligible and not statistically robust.<sup>19</sup>

In the regression model, around ten percent of the observed variance in ratings can be explained for the indicators examined. This is a respectable value for analyses of population surveys, pointing to the relevance of the personal characteristics included. It also becomes clear, however, that most of the variation in the evaluations cannot be explained by the characteristics studied. In particular, individual psycho-emotional dispositions, leisure patterns, and media consumption might all play an important role here.<sup>20</sup>

At the same time, the analysis also reveals the relatively large consensus in the evaluation of political objectives between various socio-economic groups. None of the socio-economic characteristics studied show differences in the evaluations exceeding one full scale point. Even with party affiliation, this can only be observed between FDP and Left Party voters—which is hardly surprising. Accordingly, ranking of the objectives is also similar in all social subgroups. However, within the groups, the spread of the attribution of significance is considerable. This is accompanied by periodical variability of the ratings as variations in specific concerns with changing economic development reveal, such as changes in the unemployment rate. Generally, the variation across individuals and time in the assessment of relevance underlines

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<sup>19</sup> Own calculations on the basis of SOEP 2011 data.

<sup>20</sup> And specific features of the survey apply, especially the random variation of the sequence of questions.

how inappropriate it would be to use an aggregate fixed overall indicator (“anti-GDP”) as an alternative to GDP.

## Conclusion

At present, per capita income and hence gross domestic product (GDP) have no overriding importance in the eyes of Germany’s registered voters. The majority of respondents do not see growth in GDP as an area that policy-makers should address as a high priority. On the contrary, GDP is a considerably lower priority than maintaining democracy and enough work. (In)equality of income distribution is also considered to be somewhat more important. Since realizing these political objectives is ultimately closely related to a high level of GDP and its growth, however, relevant public debates on growth are also inevitable in the future.

With the W3 Indicators which are proposed by the German Bundestag’s Enquete Kommission (study commission) “Growth, Wealth, and Quality of Life,” it is possible to cover a wide range of societal goals and challenges. But to ensure political effectiveness, it is not enough to simply compute and publish the W3 Indicators. Rather, a culture of public discussion must be cultivated to enable the indicators to take on political relevance. The study commission has proposed that the federal government take a consistent (which implies a “cross-departmental”) position the W3 indicators at regular intervals (for instance, annually). This could, for example, take the form of an “Annual Report on Well-Being.”

Consistently discussing the different and sometimes conflicting aspects of economics, quality of life, and environmental sustainability could—as also seen to some extent in the study commission “Growth, Wealth, and Quality of Life”—be achieved successfully with a German “Council of Experts on Sustainable Quality of Life,” which should serve as a counterpart to the German Council of Economic Experts in particular. These would also be supplemented by the German Advisory Council on the Environment in the future.

The three councils would certainly set different priorities for analysis and policy recommendations, meaning that both the general population and policy-makers would be more informed about the development of growth, environmental sustainability, and quality of life than at present.

As a general rule, statistical indicators cannot and should not replace the political discussion process; they should facilitate it by providing scientifically grounded and well-documented information. Those who believed that an anti-GDP indicator would change the world instantly had unrealistic expectations. Looking at the outcomes realistically, the study commission “Growth, Wealth, and Quality of Life” has achieved its goal of going “beyond GDP”.

# Appendix 1

## **Final Report by the Majority of the Study Commission "Growth, Wealth, and Quality of Life"**

In its final report<sup>1</sup>, the majority of the members of the Study Commission "Growth, Wealth, and Quality of Life" outline the reasons why the catalog of indicators comprising a total of ten different individual indicators is preferable to one single alternative measurement to GDP:

“Against the background of a changed and unstable correlation between growth, wealth, and quality of life, the objective of the set of indicators is to provide an empirical, i.e., statistical, inventory of the fundamental dimensions of prosperity in a modern pluralistic society and to give citizens a clear and comprehensible overall perspective on the various aspects of prosperity today and its development. [...] Not only does each aggregate indicator ultimately require an arbitrary weighting of the individual sub-indicators, but it is also extremely difficult to interpret this type of “super indicator”: when looking at an aggregate indicator of this kind, it is generally not at all clear to which area of life an improvement or deterioration of the overall level may be attributed. This is because an aggregate indicator is always accompanied by a considerable loss of information. Therefore, instead of a single-number index, the majority of Study Commission members propose a transparent set of indicators.

According to the majority opinion, several indicators represent various different aspects of prosperity. They are all of equal importance; whether or not a “plus” in one area can offset a “minus” in another area is something each observer has to decide for him or herself.

[...] By a majority decision, the Study Commission considers competing aggregations of individual indicators to be extremely useful for the political discourse. Then every social group can enter into the debate with its own aggregation of the individual indicators. Then it will also be possible to establish where and to what extent different political thinking leads to different systems of weighting indicators and policy dimensions. All of this is useful. On the other hand, it would not be very useful if the German Federal Statistical Office (or Eurostat) provided an official aggregation.”

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<sup>1</sup> See the final report by Project Group 2 "Entwicklung eines ganzheitlichen Wohlstands- bzw. Fortschrittsindikators," the commission's printed paper 17(26)87, 11 and 14. ([www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/87\\_Abschlussbericht\\_PG\\_2.pdf](http://www.bundestag.de/bundestag/gremien/enquete/wachstum/Kommissionsdrucksachen/87_Abschlussbericht_PG_2.pdf)).

## Appendix 2

### Survey of the Electorate

In a representative telephone survey conducted by TNS Infratest on January 28 and 29, 2013, for each of the ten indicators selected by the majority of the Enquete Commission, 1,012 respondents ranked the importance on a scale ranging from zero ("not at all important") to ten ("very important"). The ten indicators in the survey were comprehensibly presented and introduced as follows:

"Policy addresses many areas which directly affect both individuals' personal situation and the general development of the economy and society. I will name ten areas. Please tell me for each one whether, in your opinion, it should play an important or not so important role in politics in Germany. Please use a scale of zero to ten. "0" means the policy area is "not at all important" to you and should not play a significant role. "10" means the policy area is "very important" and should play a major role. You can use the values in between to give your opinion on the various policy areas.

How important is it to you that German policy-makers address the following issues?<sup>1</sup>

1. average per capita income<sup>2</sup> in Germany
2. inequality of income and assets
3. public debt
4. that as many people as possible have enough work
5. that the life expectancy of people continues to increase
6. that more students obtain a further school or educational qualification<sup>3</sup>
7. that democracy and freedom are maintained in Germany
8. that the emission of harmful greenhouse gases we produce is reduced
9. that the harmful nitrogen surplus we produce is reduced that a stop is put to the extinction of endangered species and biodiversity preserved."

---

<sup>1</sup> Here, the interviewer also could give further instructions: "For this question, your personal point of view of a topic is not relevant here. We would just like to know how important it is to you that policy-makers address this issue."

<sup>2</sup> Instead of the concept of GDP, which is more difficult to understand, respondents were asked about the closely associated per capita income.

<sup>3</sup> Here, too, the interviewer could give further instructions: "For this question, a further qualification means that more young people obtain higher school qualifications, for example, the Abitur. Either directly at school or through further training."

For the first three indicators, no direction of change was stipulated, since obviously both more and less income could be endorsed; the same applies to inequality and public debt. For the other seven areas, however, it is clear what is desirable and therefore—in order to make it easier for respondents to answer the questions—a direction was stipulated.<sup>4</sup>

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<sup>4</sup> In order to minimize the influence of the sequence of individual questions on the responses, the questions were randomized in blocks: 1 to 3, 4 to 7, and 8 to 10. Any possible influence of the position of the question on differences in mean values between the indicators is thus avoided, but at the same time the spread within the individual indicators is increased.

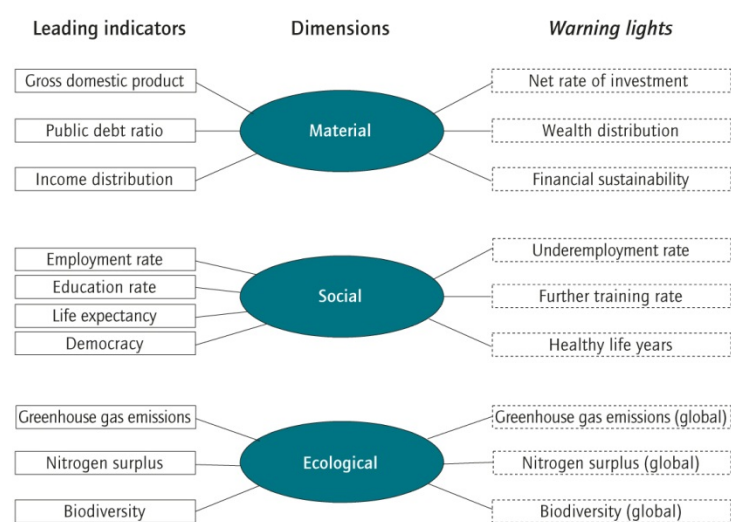


# Appendix 3

## Figures and Tables

Figure 1

### Prosperity Dimensions and W3 Indicators



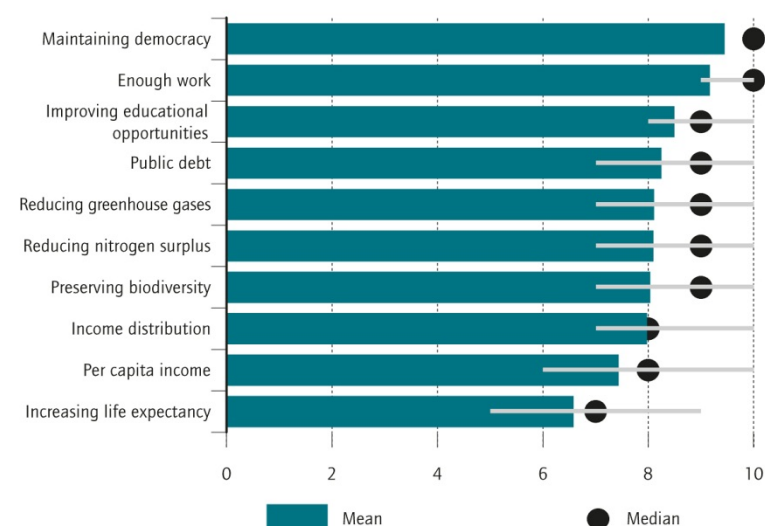
Sources: Enquete Commission "Growth, Wealth, and Quality of Life,"  
Graphic by DIW Berlin.

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Figure 2

### Relevance of Areas of Life<sup>1</sup>

Survey results (0 = not at all important; 10 = very important)



<sup>1</sup> Responses to the question: "How important is it to you for German policy-makers to address the following issues?"

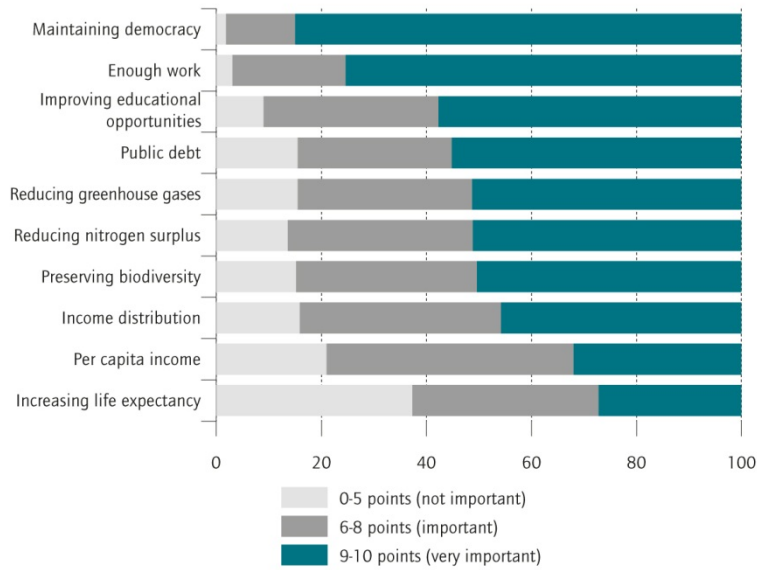
Source: TNS Infratest telephone survey (January 2013), 1,012 respondents; calculations by DIW Berlin.

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Figure 3

### Relevance of Areas of Life<sup>1</sup>

Survey results in percent



<sup>1</sup> Responses to the question: "How important is it to you for German policy-makers to address the following issues?"

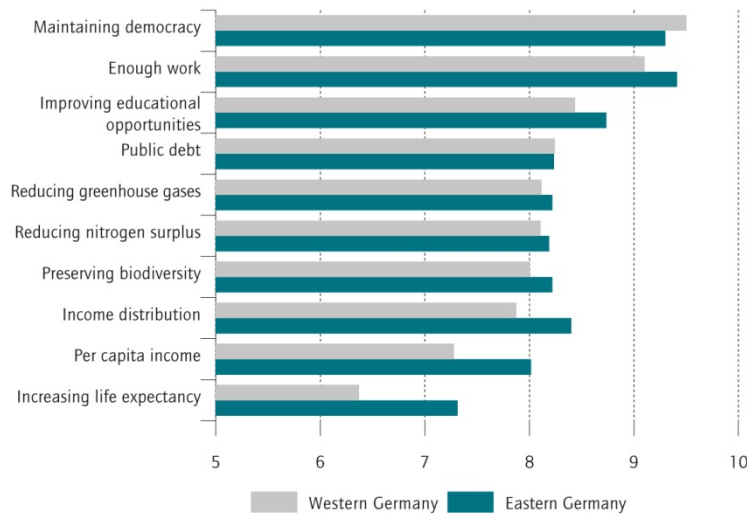
Source: TNS Infratest telephone survey (January 2013), 1,012 respondents; calculations by DIW Berlin.

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Figure 4

### Relevance of Areas of Life<sup>1</sup> by Region

Survey results (0 = not at all important; 10 = very important)



<sup>1</sup> Responses to the question: "How important is it to you for German policy-makers to address the following issues?"

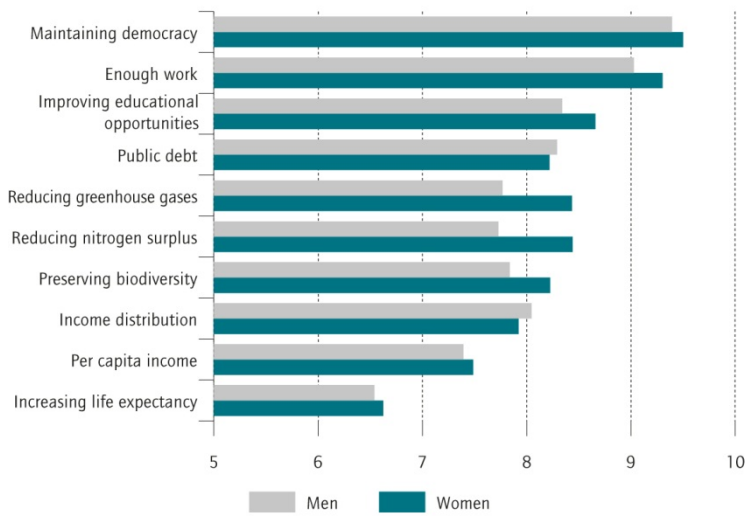
Source: TNS Infratest telephone survey (January 2013), 1,012 respondents; calculations by DIW Berlin.

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Figure 5

### Relevance of Areas of Life<sup>1</sup> by Gender

Survey results (0 = not at all important; 10 = very important)



<sup>1</sup> Responses to the question: "How important is it to you for German policy-makers to address the following issues?"

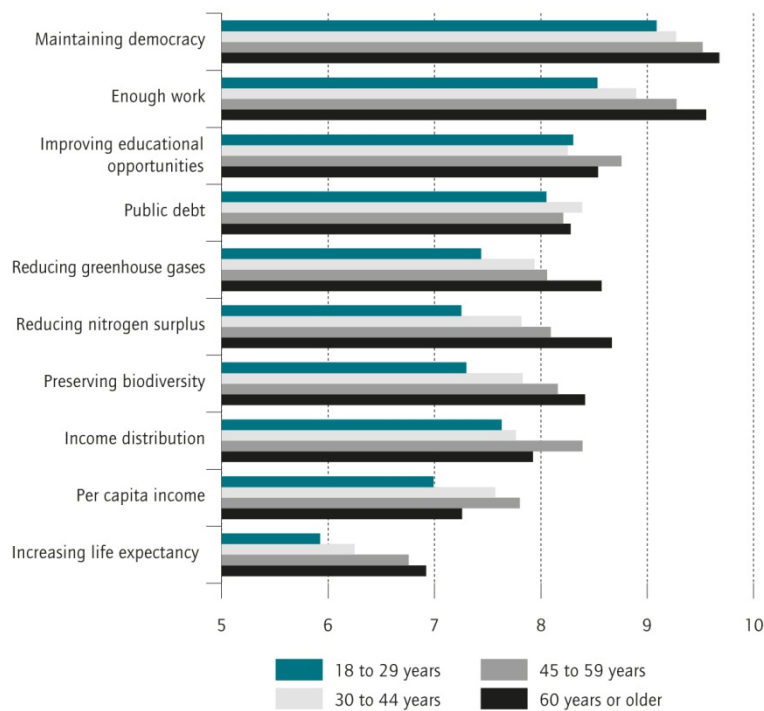
Source: TNS Infratest telephone survey (January 2013), 1,012 respondents; calculations by DIW Berlin.

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Figure 6

### Relevance of Areas of Life<sup>1</sup> by Age

Survey results (0 = not at all important; 10 = very important)



<sup>1</sup> Responses to the question: "How important is it to you for German policy-makers to address the following issues?"

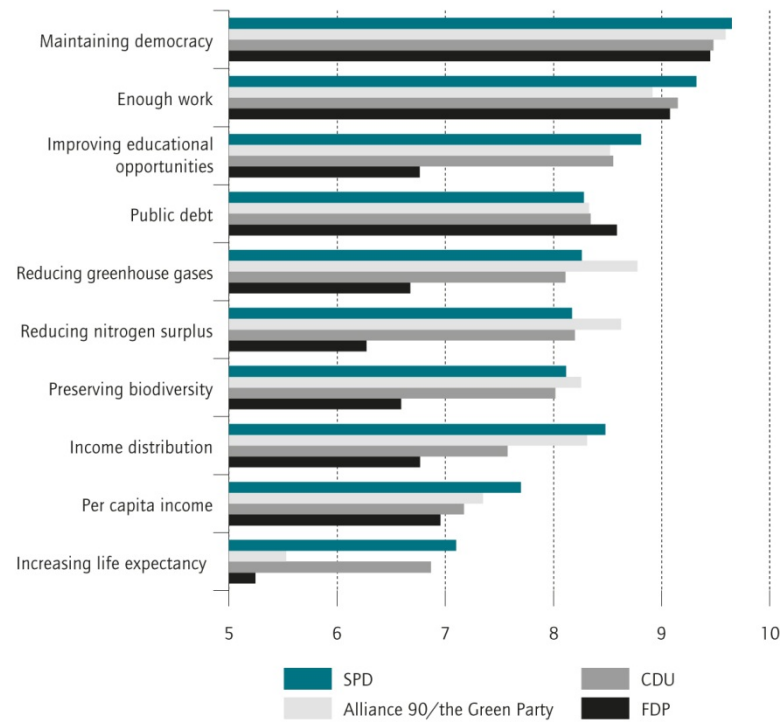
Source: TNS Infratest telephone survey (January 2013), 1,012 respondents; calculations by DIW Berlin.

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Figure 7

### Relevance of Areas of Life<sup>1</sup> According to Voting Intentions

Survey results (0 = not at all important; 10 = very important)



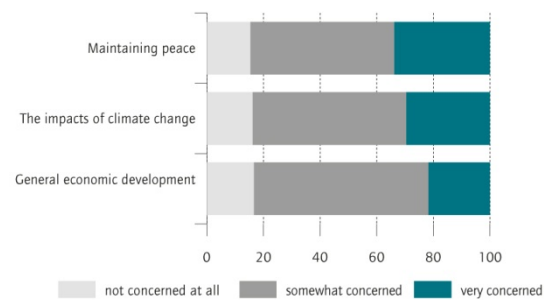
<sup>1</sup> Responses to the question: "How important is it to you for German policy-makers to address the following issues?"

Source: TNS Infratest telephone survey (January 2013), 1,012 respondents; calculations by DIW Berlin.

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Figure 8

### Concerns about Prosperity<sup>1</sup>



<sup>1</sup> Responses to the question: "What is your attitude towards the following areas—are you concerned about them?"

Source: SOEP v28 (2011), 20,531 respondents; calculations by DIW Berlin.

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Table

**Determinants of the Importance of Various Areas of Life**

OLS regression results

	Democracy	Work	Education	Debt	Greenhouse gases	Nitrogen surplus	Biodiversity	Income distribution	Per capita income	Life expectancy
<b>Place of residence</b> (reference group: western Germany)										
Eastern Germany	-0.07	0.20*	0.37**	0.08	0.06	0.05	0.14	0.51**	0.59**	0.70**
<b>Gender</b> (reference group: male)										
Female	0.14	0.26**	0.22*	0.06	0.64**	0.61**	0.31**	-0.15	0.10	0.19
<b>Age group</b> (reference group: 18 to 29 years)										
30 to 44 years	-0.04	0.14	-0.18	-0.06	0.54**	0.47*	0.27	-0.15	0.63**	0.21
45 to 59 years	0.23	0.38**	0.22	-0.26	0.53**	0.62**	0.31	0.44*	0.51**	0.64**
60 years or older	0.31	0.72**	-0.03	-0.38	0.70**	0.79**	0.48	-0.23	-0.20	0.83*
<b>Education</b> (reference group: no Abitur or school-leaving certificate)										
Abitur	-0.16	-0.35**	-0.70**	0.00	-0.49**	-0.85**	-1.12**	-0.63**	-0.80**	-1.01**
<b>Household income<sup>1</sup></b> (reference group: 0 to 1,500 euros)										
1,500 to 3,000 euros	0.23**	0.15	-0.38**	0.70**	-0.26	-0.11	0.13	0.48**	0.39**	-0.40*
3,000 euros or more	0.40**	0.02	-0.41**	0.99**	-0.21	-0.32	0.09	0.10	-0.41*	-1.33**
<b>Employment status</b> (reference group: in gainful employment)										
Training/education	-0.23	-0.48**	-0.48	-0.27	-0.05	-0.24	-0.53	-0.43	0.06	-1.03**
Unemployed	-0.29	0.38*	0.11	-0.05	-0.38	-0.43	-0.05	-0.08	0.46	-0.47
Pensioners/semi-retired	0.00	-0.09	-0.17	0.35	0.32	0.31	0.05	0.19	0.12	-0.79**
Inactive/other	-0.14	-0.07	0.40	-0.98**	-0.40	-0.03	0.36	-0.27	-0.01	-0.55
<b>Voting intention</b> (reference group: CDU)										
SPD	0.14	0.10	0.22	0.01	0.21	-0.04	-0.02	0.74**	0.33*	0.04
Alliance 90/the Green Party	0.08	-0.15	0.12	0.12	0.67**	0.48*	0.41*	0.85**	0.32	-1.04**
FDP	-0.08	-0.15	-1.77**	0.33	-1.44**	-2.01**	-1.57**	-1.02**	-0.41	-1.89**
The Left Party	-0.23	0.07	-0.05	0.06	0.32	0.06	0.06	1.45**	1.06**	-0.06
The Pirate Party	-0.20	0.12	-0.31	-0.60	0.26	-0.10	-0.25	0.40	0.14	-1.48**
Non-voters	-0.41**	-0.44**	-0.52*	-0.53	-0.69**	-0.60*	0.36	0.00	0.00	-0.97**
Other	-0.14	0.09	-0.16	0.16	-0.25	-0.31	-0.09	-0.01	0.13	-0.69**
Constants	9.14**	8.67**	8.85**	7.78**	7.51**	7.65**	7.76**	7.52**	6.93**	7.32**
Number of cases	932	931	934	931	932	927	933	930	924	930
R <sup>2</sup>	0.066	0.093	0.094	0.048	0.101	0.129	0.098	0.099	0.099	0.143

Probability of error: \* &lt; 10 percent, \*\* &lt; 5 percent.

<sup>1</sup> Monthly net income of the entire household after tax.

Sources: TNS Infratest telephone survey (January 2012), 1,012 respondents; calculations by DIW Berlin.

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